Ronald G. Blom, Robert E. Crippen, 300-233 Jet Propulsion Laboratory, Pasadena CA 91109, Internet: ronald.blom@jpl.nasa.gov, Jana K. Owen, Anthropology Dept. Univ. California Los Angeles, LA CA 90095, Juris Zarins, Dept. of Sociology and Anthropology, Southwest Missouri State University, Springfield, MO, 65804. Possible ancient anthrosols near Lost City of Ubar site in Oman

During mapping for the Wadi al Jubal Archaeological Project in Yemen, USGS Geologists Overstreet and Grolier mapped "anthrosols of pre-Islamic age" east of the Marib dam site (15D 24M N, 45D 18M E). These soils were the result of agriculture supported by irrigation enabled by water impounded by the dam, areas which were abandoned after dam failure. During analysis of Landsat Thematic Mapper satellite images of Yemen and Oman for the Mahra Archaeological Project, we noted that these anthrosols had a distinctive image expression. Based on other remote sensing research and laboratory spectroscopy, we think that the distinctive image signature is due to low reflectivity in Landsat band 7 resulting from relatively high concentrations of gypsum in the anthrosols. Many anthrosol sites were noted, most, but not all, of them previously documented. Undocumented possible anthrosol sites include an area east of Shisr in Oman, the archaeological site discovered by us to be responsible for some features of the "Lost City of Ubar" legends. Included in legendary accounts of the Ubar region are reports of fertile oases, and "areas that have known the plow". Based on demonstrated reliability of aspects of carefully interpreted legendary accounts, we postulate that we may have located the area of desert agriculture that may have existed to support the frankincense caravansary of Ubar. The possible anthrosol area is located at approximately 18D 10M N, 53D 54M E, and will be the subject of study in a future expedition.